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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S120	1	"6614443".pn.	USPAT	OR	OFF	2006/08/02 13:53
S119	163	("345"/$.ccls. or "382"/$.ccls. or "355"/$.ccls. or "358"/$.ccls.) and (sampl$3 same ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:16
S118	10	(S105) and (sampl$3 same ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:14
S117	18	(S103 or S104) and (sampl$3 same ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:14
S113	40	(S103 or S104) and (sampl$3 and ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:05
S116	6	(S109 or S110 or S111) and (sampl$3 same ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:02
S115	20	(S109 or S110 or S111) and (sampl$3 and ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:02
S114	15	(S105) and (sampl$3 and ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:02
S112	1	(S109 or S110 or S111) and ((pattern near5 sampl$3) and ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:02
S111	210	382/269.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:01
S110	228	382/268.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:01
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S10 6	6	(S103 or S104) and ((pattern near5 sampl$3) and ((line near5 (orientation or class$2)) or ("X-major" or "X major")))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 09:01
S10 5	172	345/613.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 08:50
S10 4	416	345/443.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 08:45
S10 3	470	345/611.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 08:45
S10 2	1	o'driscoll-gerard.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 08:45
S10 0	1	odriscoll-gerard.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/08/02 08:44
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1 Combining edges and points for interactive high-quality rendering

Kavita Bala, Bruce Walter, Donald P. Greenberg
July 2003 **ACM Transactions on Graphics (TOG)**, Volume 22 Issue 3
Publisher: ACM Press
Full text available: 📄 pdf(4.52 MB)   Additional Information: full citation, abstract, references, index terms

This paper presents a new interactive rendering and display technique for complex scenes with expensive shading, such as global illumination. Our approach combines sparsely sampled shading (points) and analytically computed discontinuities (edges) to interactively generate high-quality images. The *edge-and-point* image is a new compact representation that combines edges and points such that fast, table-driven interpolation of pixel shading from nearby point samples is possible, while respe ...

Keywords: interactive software rendering, silhouette and shadow edges, sparse sampling and reconstruction

2 Compressed multisampling for efficient hardware edge antialiasing

Philippe Beaudoin, Pierre Poulin
May 2004 **Proceedings of the 2004 conference on Graphics interface GI '04**
Publisher: Canadian Human-Computer Communications Society
Full text available: 📄 pdf(478.49 KB)   Additional Information: full citation, abstract, references

Today's hardware graphics accelerators incorporate techniques to antialias edges and minimize geometry-related sampling artifacts. Two such techniques, brute force supersampling and multisampling, increase the sampling rate by rasterizing the triangles in a larger antialiasing buffer that is then filtered down to the size of the framebuffer. The sampling rate is proportional to the number of subsamples in the antialiasing buffer and, when no compression is used, to the memory it occupies. In tur ...

Keywords: edge antialiasing, graphics hardware, multisampling

3 Generating antialiased images at low sampling densities

Don P. Mitchell
August 1987 **ACM SIGGRAPH Computer Graphics , Proceedings of the 14th annual conference on Computer graphics and interactive techniques SIGGRAPH '87**, Volume 21 Issue 4
Publisher: ACM Press
Full text available: 📄 pdf(2.64 MB)   Additional Information: full citation, abstract, references, citings, index terms

Ray tracing produces point samples of an image from a 3-D model. Constructing an antialiased digital picture from point samples is difficult without resorting to extremely high sampling densities. This paper describes a program that focuses on that problem.

While it is impossible to eliminate aliasing totally, it has been shown that nonuniform sampling yields aliasing that is less conspicuous to the observer. An algorithm is presented for fast generation of nonuniform sampling patterns that are ...

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1 Prefiltered antialiased lines using half-plane distance functions
Robert McNamara, Joel McCormack, Norman P. Jouppi
August 2000 **Proceedings of the ACM SIGGRAPH/EUROGRAPHICS workshop on Graphics hardware**
Publisher: ACM Press
Full text available: 🗎 pdf(2.53 MB)   Additional Information: full citation, abstract, references, index terms

We describe a method to compute high-quality antialiased lines by adding a modest amount of hardware to a fragment generator based upon half-plane edge functions. (A fragment contains the information needed to paint one pixel of a line or a polygon.) We surround an antialiased line with four edge functions to create a long, thin, rectangle. We scale the edge functions so that they compute signed distances from the four edges. At each fragment within the antialiased line, the four distances ...

Keywords: atialiasing, graphics accelerators, prefiltering

2 High speed high quality antialiased vector generation
Anthony C. Barkans
September 1990 **ACM SIGGRAPH Computer Graphics , Proceedings of the 17th annual conference on Computer graphics and interactive techniques SIGGRAPH '90**, Volume 24 Issue 4
Publisher: ACM Press
Full text available: 🗎 pdf(2.87 MB)   Additional Information: full citation, abstract, references, citings, index terms

A vector generation method is described in which a high quality image rendering scheme is coupled with a high speed scan-conversion algorithm.The rendering scheme consists of two parts. First a prefiltering method is used to antialias the vectors. Second a compositing technique is used to compose the vectors into the frame-buffer.The scan-conversion algorithm presented allows a single vector to be scan-converted by a either by a single processor or a set of processors running in parallel. When u ...

3 Hardware accelerated rendering of antialiasing using a modified a-buffer algorithm
Stephanie Winner, Mike Kelley, Brent Pease, Bill Rivard, Alex Yen
August 1997 **Proceedings of the 24th annual conference on Computer graphics and interactive techniques**
Publisher: ACM Press/Addison-Wesley Publishing Co.
Full text available: 🗎 pdf(113.06 KB)   Additional Information: full citation, references, citings, index terms

Keywords: antialiasing, image partitioning, plane equation evaluation, scanline, texture mapping, transparency

4 Combining edges and points for interactive high-quality rendering

Kavita Bala, Bruce Walter, Donald P. Greenberg

July 2003 **ACM Transactions on Graphics (TOG)**, Volume 22 Issue 3

Publisher: ACM Press

Full text available: pdf(4.52 MB)   Additional Information: full citation, abstract, references, index terms

This paper presents a new interactive rendering and display technique for complex scenes with expensive shading, such as global illumination. Our approach combines sparsely sampled shading (points) and analytically computed discontinuities (edges) to interactively generate high-quality images. The *edge-and-point* image is a new compact representation that combines edges and points such that fast, table-driven interpolation of pixel shading from nearby point samples is possible, while respe ...

Keywords: interactive software rendering, silhouette and shadow edges, sparse sampling and reconstruction

5 An interactive introduction to OpenGL programming

Dave Shreiner, Ed Angel, Vicki Shreiner

August 2004 **Proceedings of the conference on SIGGRAPH 2004 course notes SIGGRAPH '04**

Publisher: ACM Press

Full text available: pdf(3.35 MB)   Additional Information: full citation, abstract

"An Interactive Introduction to OpenGL Programming" provides an overview of the OpenGL Application Programming Interface (API), a library of subroutines for drawing three-dimensional objects and images on a computer. After the completion of the course, a programmer able to write simple programs in the "C" language will be able to create an OpenGL application that has moving 3D objects that look like they are being lit by lights in the scene and by specifying colors or images that should be used ...

6 An efficient antialiasing technique

Xiaolin Wu

July 1991 **ACM SIGGRAPH Computer Graphics , Proceedings of the 18th annual conference on Computer graphics and interactive techniques SIGGRAPH '91**, Volume 25 Issue 4

Publisher: ACM Press

Full text available: pdf(1.28 MB)   Additional Information: full citation, abstract, references, citings, index terms

An intuitive concept of antialiasing is developed into very efficient antialiased line and circle generators that require even less amount of integer arithmetic than Bresenham's line and circle algorithms. Unlike its predecessors, the new antialiasing technique is derived in spatial domain (raster plane) under a subjectively meaningful error measure to preserve the dynamics of curve and object boundaries. A formal analysis of the new antialiasing technique in frequency domain is also conducted. ...

Keywords: antialiasing, convolution, curve digitization, digital geometry

7 Compressed multisampling for efficient hardware edge antialiasing

Philippe Beaudoin, Pierre Poulin

May 2004 **Proceedings of the 2004 conference on Graphics interface GI '04**

Publisher: Canadian Human-Computer Communications Society

Full text available: pdf(478.49 KB)   Additional Information: full citation, abstract, references

Today's hardware graphics accelerators incorporate techniques to antialias edges and minimize geometry-related sampling artifacts. Two such techniques, brute force supersampling and multisampling, increase the sampling rate by rasterizing the triangles in a larger antialiasing buffer that is then filtered down to the size of the framebuffer. The sampling rate is proportional to the number of subsamples in the antialiasing buffer and, when no compression is used, to the memory it occupies. In tur ...

Keywords: edge antialiasing, graphics hardware, multisampling

8 ## Stochastic sampling in computer graphics

Robert L. Cook

January 1986 **ACM Transactions on Graphics (TOG)**, Volume 5 Issue 1

Publisher: ACM Press

Full text available: pdf(4.08 MB)   Additional Information: full citation, abstract, references, citings, index terms, review

Ray tracing, ray casting, and other forms of point sampling are important techniques in computer graphics, but their usefulness has been undermined by aliasing artifacts. In this paper it is shown that these artifacts are not an inherent part of point sampling, but a consequence of using regularly spaced samples. If the samples occur at appropriate nonuniformly spaced locations, frequencies above the Nyquist limit do not alias, but instead appear as noise of the correct average intensity. T ...

9 ## The Reyes image rendering architecture

Robert L. Cook, Loren Carpenter, Edwin Catmull

August 1987 **ACM SIGGRAPH Computer Graphics , Proceedings of the 14th annual conference on Computer graphics and interactive techniques SIGGRAPH '87**, Volume 21 Issue 4

Publisher: ACM Press

Full text available: pdf(944.35 KB)   Additional Information: full citation, abstract, references, citings, index terms

An architecture is presented for fast high-quality rendering of complex images. All objects are reduced to common world-space geometric entities called micropolygons, and all of the shading and visibility calculations operate on these micropolygons. Each type of calculation is performed in a coordinate system that is natural for that type of calculation. Micropolygons are created and textured in the local coordinate sysem of the object, with the result that texture filtering is simplified and im ...

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Engineering in Medicine and Biology Society, 2005. IEEE-EMBS 2005. 27th Annual International Conference of the
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Applied Superconductivity, IEEE Transactions on
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Kam-Lun Tang; Chi-Keung Tang; Tien-Tsin Wong;
Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference on
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Lavoie, P.; Ionescu, D.; Petriu, E.;
Image Analysis and Processing, 1999. Proceedings. International Conference on
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Volume 15, Issue 2, Mar 1979 Page(s):972 - 981
IEEE JNL

16. On-line data-driven fuzzy clustering with applications to real-time robotic tracking
Liu, P.X.; Meng, M.; Chao Hu;
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Smole, P.; Ruile, W.; Korden, C.; Ludwig, A.; Krassnitzer, S.; Pongratz, P.;
Ultrasonics, 2003 IEEE Symposium on
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Applied Superconductivity, IEEE Transactions on
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Applied Superconductivity, IEEE Transactions on
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